

CLAIMS

1. A spinal implant cutting apparatus comprising:
a first mandrel configured to support a substantially cylindrical spinal implant; and
a cutting blade moveable from a first position at which it is spaced from a spinal implant supported on the first mandrel to a second position at which it is in cutting engagement with the spinal implant.
2. The apparatus of claim 1, wherein the spinal implant is configured to be rotated with respect to the cutting blade.
3. The apparatus of claim 2, wherein the first mandrel is configured to support a hollow spinal implant such that the spinal implant is slidably mounted on the first mandrel.
4. The apparatus of claim 3, wherein the first mandrel is detachable from the apparatus to permit loading and removal of the spinal implant on the first mandrel.
5. The apparatus of claim 2, further comprising means for rotating the first mandrel.
6. The apparatus of claim 2, further comprising a handle associated with the first mandrel configured to rotate the first mandrel.
7. The apparatus of claim 6, further comprising a ratchet mechanism associated with the handle for rotating the first mandrel.
8. The apparatus of claim 2, further comprising a frame, the cutting fixture being slidably mounted to the frame.
9. The apparatus of claim 8, further comprising a first reference point associated with the frame and a second reference point associated with the cutting blade, the reference points configured to permit placement of the

cutting blade such that the spinal implant can be cut to a desired length.

10. The apparatus of claim 9, wherein the reference points comprise a pair of notches configured to receive ends of an intervertebral caliper measurement device.

11. The apparatus of claim 9, further comprising a plurality of notches associated with the cutting blade referenced to a plurality of different sized spinal implants.

12. The apparatus of claim 2, further comprising a cutting fixture for securing the cutting blade, wherein the cutting blade is readily removable from the cutting fixture.

13. The apparatus of claim 2, wherein the cutting blade is configured to be positioned at a plurality of positions along the length of the spinal implant.

14. The apparatus of claim 12, wherein the cutting fixture is mounted on a frame configured to permit the cutting blade to move in increments with respect to the spinal fixture.

15. The apparatus of claim 14, wherein the increments are matched to marked spacings associated with spinal implant.

16. The apparatus of claim 12, wherein the cutting blade is held in place by a locking spring.

17. The apparatus of claim 12, wherein the cutting blade fixture is movable in a direction substantially transverse to the longitudinal axis of the spinal implant.

18. The apparatus of claim 17, wherein rotation of an adjustment knob causes movement of the cutting blade substantially transverse to the longitudinal axis of the spinal implant.

19. The apparatus of claim 18, wherein the mandrel is mounted in a pair of channels formed on the apparatus, the channels being made from a friction-reducing material.

20. A spinal implant cutting apparatus comprising:
a frame;
means for supporting a spinal implant removably mounted to the frame;
means for cutting the spinal implant mounted to the frame;
means for rotating the spinal implant with respect to the cutting means; and
means for positioning the cutting means with respect to the spinal implant to cut the spinal implant to a preselected length.

21. A spinal implant cutting apparatus comprising:
a frame including a rotatable first mandrel for supporting a substantially cylindrical spinal implant;
a cutting fixture including a cutting blade, the cutting fixture being slidably mounted to the frame such that the cutting fixture can be moved to a plurality of positions along the length of the spinal implant and cut the spinal implant to a pre-selected length.

22. The cutting apparatus of claim 21, further comprising indicia associated with the apparatus for receiving an intervertebral space measurement to accurately determine the length of the spinal implant.

23. The cutting apparatus of claim 21, wherein the indicia comprises a pair of reference marks.

24. The cutting apparatus of claim 22, wherein the pair of reference marks are configured to received the ends of a caliper.

25. The cutting apparatus of claim 24, wherein the reference marks are associated with the cutting fixture and the frame.

26. The apparatus of claim 23, wherein the spinal implant includes a substantially tubular cage.

27. A spinal implant cutting apparatus comprising:
a first mandrel removably attached to a frame, the removable mandrel adapted to receive a substantially tubular spinal implant;

a cutting blade configured to be placed in cutting engagement with the spinal implant; and

reference marks associated with the cutting blade and the apparatus adapted to receive an intervertebral spacing measurement from a caliper.

28. A method of sizing a spinal implant comprising:

using a measurement device to obtain the distance between two vertebrae to obtain a desired length for the spinal implant;

mounting the spinal implant on a mandrel associated with a cutting apparatus including a cutting fixture mounted to a frame, the cutting fixture including a cutting blade;

securing the mandrel to the cutting apparatus;

positioning the cutting blade with respect to the spinal implant with reference to the distance obtained by the measurement device and cutting the spinal implant to the desired length.

29. The method of claim 27, wherein positioning the cutting blade includes sliding the cutting fixture with respect to the spinal implant.

30. The method of claim 28, further comprising locking the cutting fixture in place.

31. The method of claim 29, wherein the measurement device includes a caliper having a pair of arms.

32. The method of claim 30, wherein the apparatus includes a pair of reference marks associated with the ends of the spinal implant after it has been cut.

33. The method of claim 31, wherein the spacing between the arms of the caliper corresponds to the desired length of the spinal implant.

34. The method of claim 32, further comprising placing the arms adjacent to the reference marks to position the cutting blade for cutting the spinal implant to the desired length.

35. The method of claim 33, wherein a plurality of reference marks are associated with the cutting blade corresponding to different sized spinal implants.

36. The method of claim 34, further comprising advancing the cutting blade towards the spinal implant so that the cutting blade and the spinal implant are in contact.

37. The method of claim 35, further comprising rotating the first mandrel.

38. The method of claim 37, further comprising cutting through the spinal implant.

39. The method of claim 38, further comprising moving the cutting blade away from the spinal implant.

40. The method of claim 39, further comprising removing the first mandrel from the apparatus after the spinal implant has been cut.

41. The method of claim 40, further comprising removing the cut spinal implant from the first mandrel.

42. A method of sizing a substantially cylindrical hollow spinal implant comprising:

sliding the spinal implant on to a mandrel;

measuring the size of the implant needed using a caliper having a pair of arms, the size of the implant corresponding to the distance between the arms;

positioning a caliper with respect to the spinal implant and the cutting blade to determine the length of the implant to be cut;

fixing the position of the cutting blade in relation to the spinal implant; and

rotating the mandrel while the blade is in contact with the spinal implant until the cutting blade has cut through the spinal implant.

43. The method of claim 42, wherein the spinal implant includes a spinal cage.

44. The method of claim 43, wherein the spinal cage includes circumferential grooves formed on the exterior surface of the cage and spaced along the length of the cage.

45. The method of claim 44, wherein the cutting blade is associated with a track and the blade can be moved in increments corresponding to the spacing between the circumferential grooves on the cage.

46. The method of claim 45, wherein a locking pin is used to secure the cage to the mandrel.

47. The method of claim 44, wherein the cage is cut transverse to the longitudinal axis of the cage.